



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/516,447

11/29/2004

Raanan Ben-Horin

7031P007

2936

8791 7590 05/07/2007  
BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

RIPLEY, JAY R

ART UNIT

PAPER NUMBER

3679

MAIL DATE

DELIVERY MODE

05/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/516,447

Applicant(s)

BEN-HORIN, RAANAN

Examiner

Jay R. Ripley

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04/18/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/18/2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/18/2007 has been entered.

### ***Drawings***

1. The drawings were received on 04/18/2007. These drawings are acceptable.

### ***Claim Objections***

2. Claim 21 is objected to because of the following informalities: It appears that the Applicant has transposed the strikethrough and underlining in line 6 in regard to the amended language, i.e. "~~there into~~thereinto". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

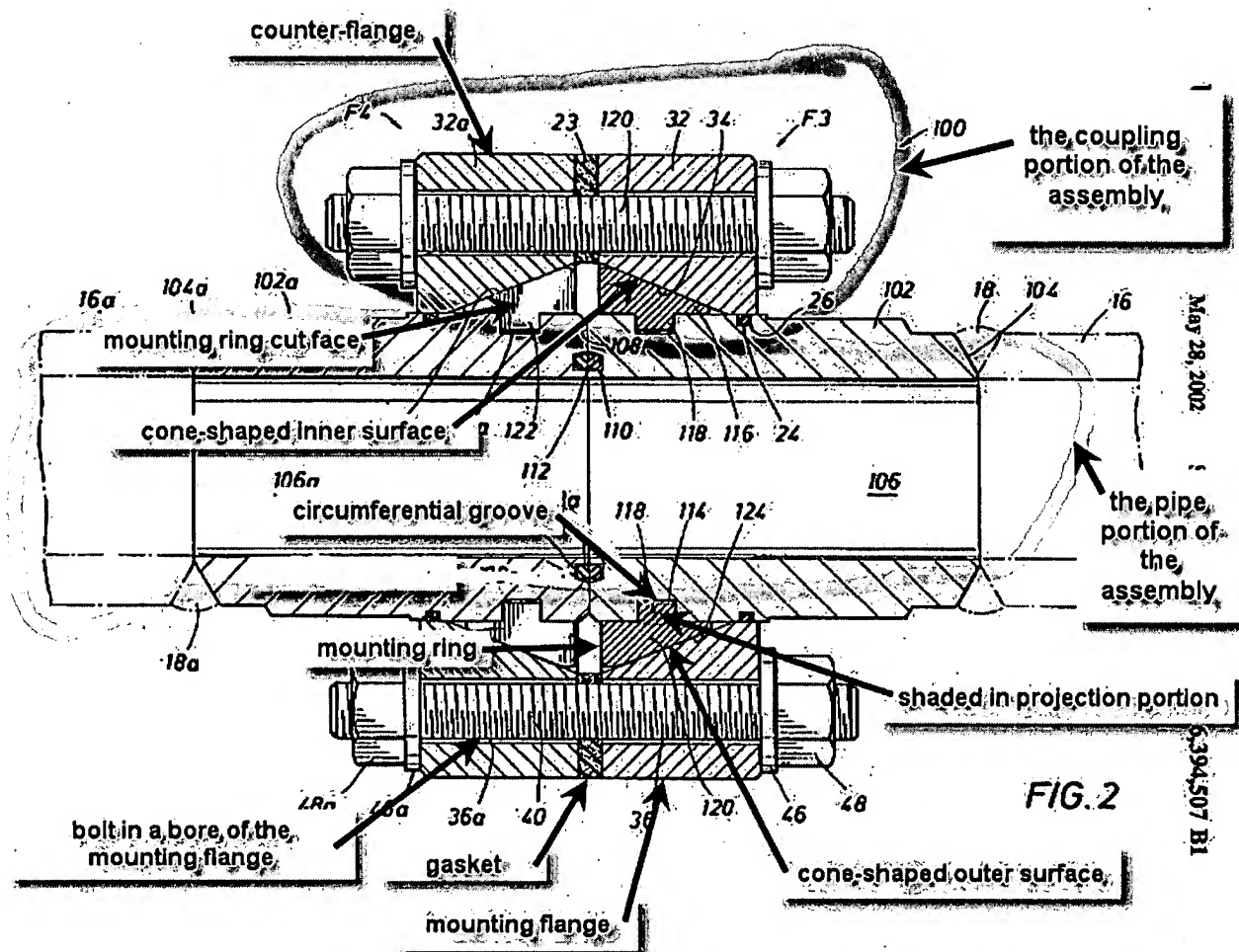
4. Claims 21-23, 26, 31, 32, 34, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker (U.S. 6,394,507).

5. In regard to claim 21, Baker discloses in Figure 2, below, a pipe coupling for connecting a pipe (16) to a counter-flange associated with another pipe (16a) in a sealed manner, wherein the pipe is formed with a circumferential groove, the coupling comprising a single gasket, a mounting ring, and a mounting flange having a coned shaped inner surface, wherein the mounting ring has a cone-shaped outer surface (as observed in marked Figure 2 below and column 9, lines 29-31 and lines 39-43) and is elastically expandable (a material suitable for the mounting ring will have elastic properties) and engages the groove by a projection portion (shaded area as observed in marked Figure 2 below) fitting there into and holding the ring affixed to the pipe (column 9, lines 30-38) when being tightened towards the counter-flange.

6. Note that Baker discloses that his invention need not have gasket 26 with the recitation, starting in column 5, line 66, "Optional O-ring seals 24 and 24a received in annular grooves 26, 26a in conjunction with a gasket 23 (see FIG. 2) disposed between flange faces 33, 33a provide

Art Unit: 3679

weather-tight sealing of connection apparatus 10." Further, gasket 112 is associated with the pipe portion of the assembly and not the pipe coupling portion of the assembly.



(marked Baker Figure 2)

7. In regard to claim 22, Baker discloses that the ring is split (column 9, lines 21-27).

8. In regard to claim 23, Baker discloses that the ring is split by a cut extending in an axial plane thereof (as observed in marked Figure 2, above, the faces of the cuts, part 122, are in a plane with the sectional cut and therefore are made by a cut extending in an axial plane of the mounting ring).

Art Unit: 3679

9. In regard to claim 26, Baker discloses that the projection portion comprises a circular rib (column 9, lines 23-26).

10. In regard to claim 31, Baker discloses that the ring has an outer cone-shaped surface (column 9, lines 29-30).

11. In regard to claim 32, Baker discloses that the cone angle is between 150-300 degrees relative to the axis of the ring (150-300 degrees is 30 degrees off the pipe central axis, therefore the 10-30 degrees as disclosed by Baker in column 2, line 63, through column 3, line 5, meets the claim).

12. In regard to claim 34, Baker discloses that the mounting flange is formed with an inner cone-shaped surface matching the cone-shaped surface of the ring (as observed in marked Figure 2 above).

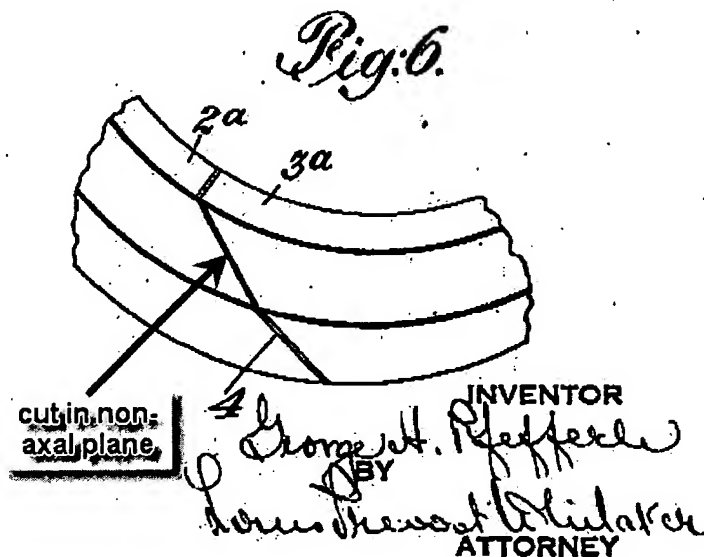
13. In regard to claim 35, Baker discloses that the mounting flange is formed with a series of bores through which tightening bolts are adapted to pass (as observed in marked Figure 2 above).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker as applied above, and further in view of Pfefferle (U.S. 1,942,489).



(marked Pferfferle Figure 6)

17. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker as applied above, and further in view of Robinson (U.S. 5,779,285).

18. In regard to claim 25, Baker does disclose that the pipe coupling components may be made of a variety of materials depending on the use of the coupling (column 10, lines 34-51), but Baker does not disclose a ring being made of plastic material. However, Robinson teaches a pipe

Art Unit: 3679

coupling wherein the ring (30) is made of plastic materials to allow functioning in a corrosive environment (column 2, lines 10-13). As Robinson relates to pipe coupling materials choice, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the ring of Baker of plastic materials as taught by Robinson to allow functioning in a corrosive environment.

19. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker as applied above, and further in view of Hanes (U.S. 3,381,983).

20. In regard to claim 27, Baker discloses the claimed invention except for the rib being of a generally saw-tooth shape having a right-angled side and a beveled side. Hanes teaches a ring (22) used with a pipe coupling with a circumferential groove that is of a generally saw-tooth shape having a right-angled side and a beveled side (as observed in Figure 6) to facilitate assembly of the coupling joint (column 3, lines 40-75, and column 4, lines 1-6). As relates to pipe coupling mounting rings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circular rib of Baker with a saw-tooth shape having a right-angled side and a beveled side ring as taught by Hanes to facilitate assembly of the coupling joint.

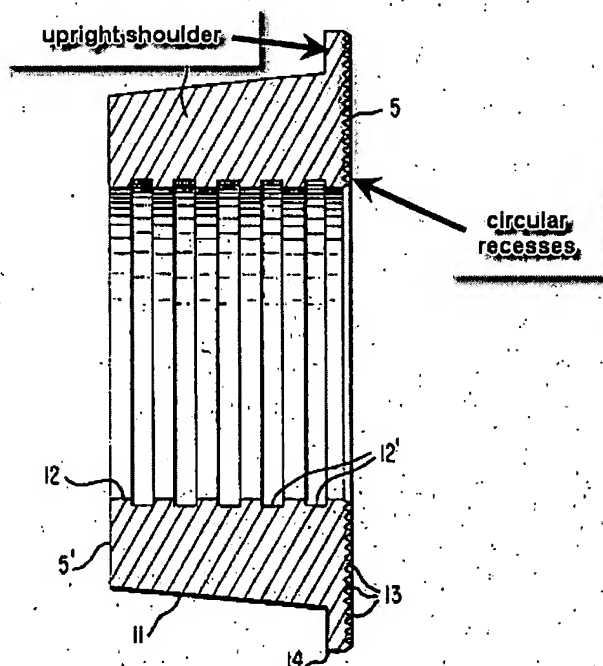
21. Claims 28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker as applied above, and further in view of Martin (U.S. 3,284,112).

22. In regard to claim 28, Baker discloses the claimed invention except for the mounting ring having a circular recess for the gasket. Martin teaches a pipe coupling with a mounting ring, as



Art Unit: 3679

observed in marked Figure 3 below, with circular recesses (13) to engage a gasket and improve sealing (column 2, lines 40-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the mounting ring of Baker with circular recesses as taught by Martin to engage a gasket and improve sealing of the o-ring gasket (23).

**FIG. 3**

(marked Martin Figure 3)

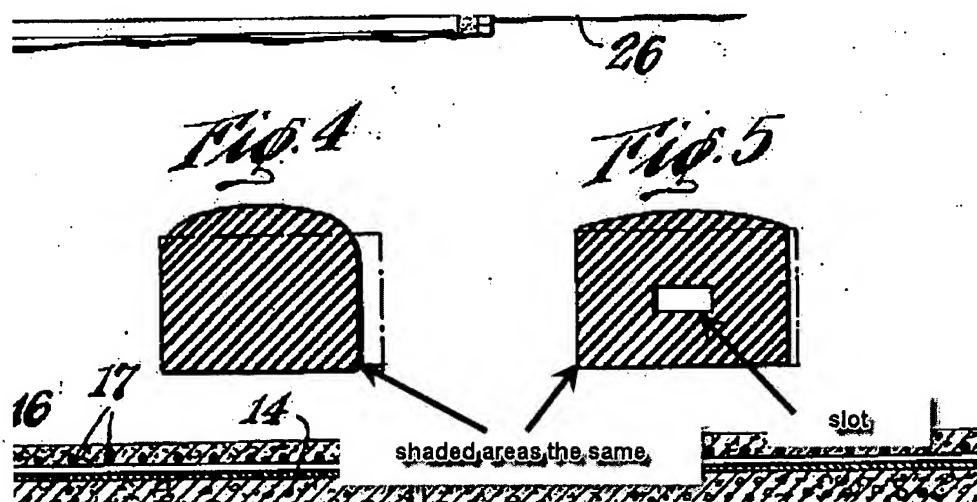
23. In regard to claim 33, Baker discloses the claimed invention except for an upright shoulder extending around the end of the cone-shaped surface. Martin, in marked Figure 3 above, further teaches a mounting ring with an upright shoulder (14) to prevent the ring from being pulled through the mounting flange (column 2, lines 62-66). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the mounting

Art Unit: 3679

ring of Baker with an upright shoulder as taught by Martin to prevent the mounting ring from being pulled through the mounting flange.

24. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker in view of Martin as applied above, and further in view of Trickey (U.S. 1,976,589).

25. In regard to claim 29, Baker in view of Martin provide the claimed invention except for the gasket having an inner slot. Trickey teaches in Figure 5, below, a pipe joint gasket having an inner slot to allow a larger gasket perimeter for a given volume of gasket material (column 4, line 146, through column 5, line 13). As Trickey relates to gaskets, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the gasket of Baker with an inner slot as taught by Trickey to allow a larger gasket perimeter for a given volume of material.

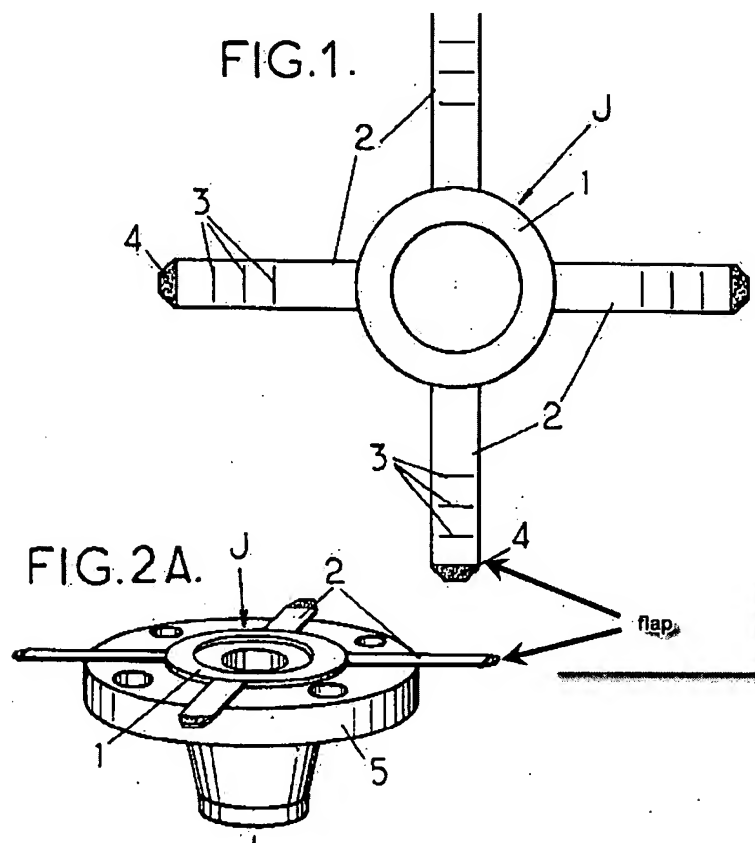


(marked Trickey Figures 4 and 5)

Art Unit: 3679

26. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker in view of Martin in view of Trickey as applied above, and further in view of Loth (U.S. 6,367,803).

27. In regard to claim 30, Baker in view of Martin and Trickey provide the claimed invention except for the gasket being formed with a thin flap. Loth teaches a gasket in marked Figures 1 and 2A, below, with a thin lip to support the gasket centered prior to assembly of the pipe connection (column 1, lines 63-65). As relates to gaskets, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the gasket of Baker in view of Martin and Trickey with a thin lip as taught by Loth to support the gasket centered prior to assembly of the pipe connection.

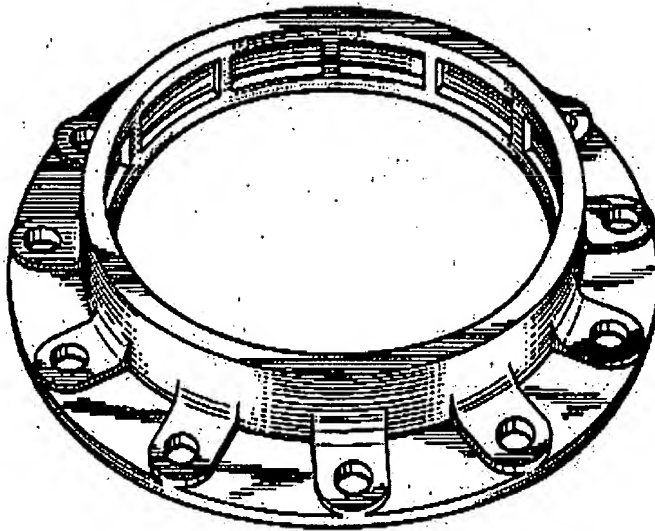


(Loth Figure 1 and Figure 2A)

Art Unit: 3679

28. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker as applied to claims above, and further in view of Milot et al (U.S. Des. 284,022).

29. In regard to claim 36, Baker discloses the claimed invention except for the series of bores being partly surrounded by arcuate projections. Milot et al teach a flange in Figure 1, below, with arcuate projections partly surrounding the bores to buttress the flange against tensional bending when the bolts are tightened. As relates to flanges, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the flange of Baker with arcuate projections partly surrounding the bores as taught by Milot et al to buttress the flange against tensional bending when the bolts are tightened.



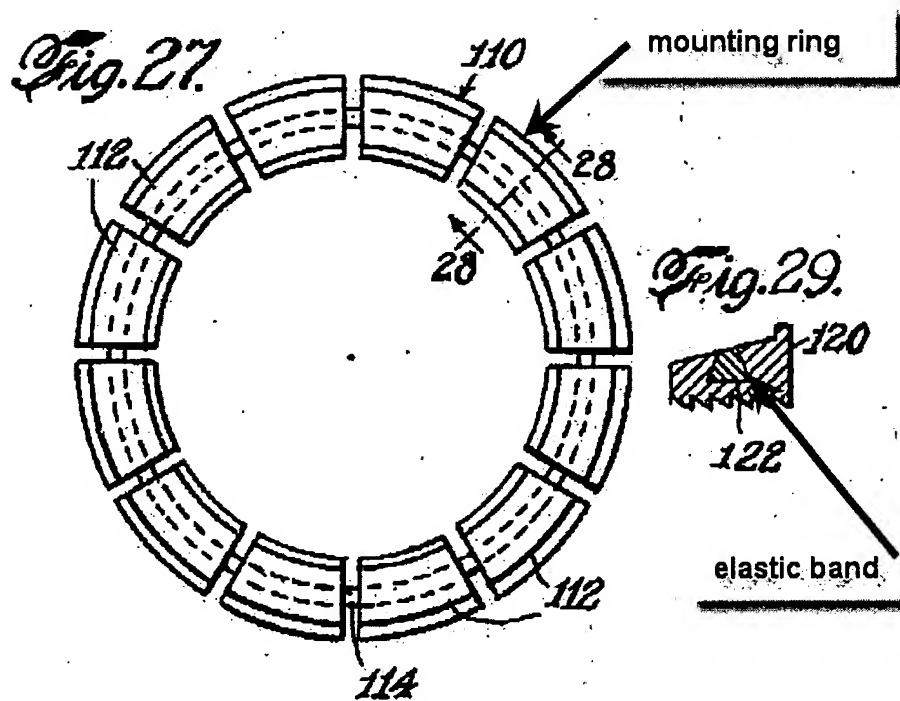
*Fig. 1*

(Milot et al Figure 1)

Art Unit: 3679

30. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker as applied above, and further in view of Risley (U.S. 2,779,610).

31. In regard to claim 37, Baker discloses the claimed invention except for the ring segments being held together by an elastic band. Risley teaches a pipe coupling with a multi-segment mounting ring in Figure 27, below, with an elastic band (122 as observed in Figure 29. below) holding the segments together to allow the segments to be moved radially inwardly into engagement with the pipe surface when compressed (column 6, lines 33-40). As relates to multi-segment mounting rings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the mounting ring of Baker with an elastic band as taught by Risley to allow the segments to be moved radially inwardly into engagement with the pipe surface when compressed.



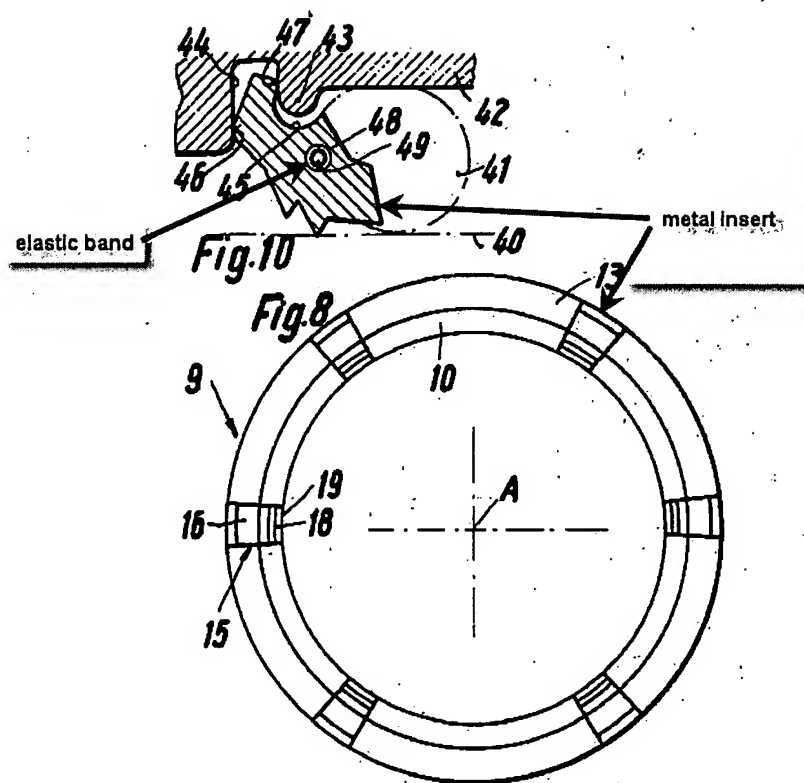
(marked Risley Figures 27 and 29)

Art Unit: 3679

32. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker in view of Risley as applied above, and further in view of Seiler (U.S. 2,779,610).

33. In regard to claim 38, Baker in view of Risley provide for the claimed invention except for metal inserts being interposed between adjacent segments. Seiler in Figures 8 and 10, below, teach placing metal insets (metal as shown by the crosshatching in Figure 8) as an anti-thrust provision in rings of pipe connections to secure the male end against thrust (column 1, lines 1-2, and column 1, line 68, through column 2, line 1). As relates to pipe connection rings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the segmented ring as provided by Baker in view of Risley with metal inserts interposed between adjacent segments as taught by Seiler to secure the male end against thrust.

34. In regard to claim 39, Seiler further teaches that the segments and inserts be held together by an elastic band threaded therethrough to secure the metal segments in the ring (column 6, lines 12-26). As relates to pipe connection rings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to hold the segments and inserts of the segmented ring provided by Baker in view of Risley by an elastic band threaded therethrough as taught by Seiler to secure the metal segments in the segmented ring.



(marked Seiler Figures 8 and 10)

35. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker. Baker discloses the claimed invention except for explicitly stating that the mounting ring being made of sheet metal. Baker does show that the ring is made of steel in Figure 2 above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the mounting ring of sheet metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design, *In re Leshin*, 125 USPQ 416.

***Allowable Subject Matter***

36. The indicated allowability of claims 38 and 39 is withdrawn in view of the rejections above. Claims 38 and 39 were inadvertently indicated as allowable in the Office Action filed 01/23/2007 despite the 35 USC § 103 obviousness rejections advanced above.

***Response to Arguments***

37. Applicant's arguments filed 04/18/2007 have been fully considered but they are not persuasive.

38. The Applicant's arguments appear to be drawn to the amended language of claim 21 to overcome the prior art of record, specifically Baker (U.S. 6,394,507). Applicant makes note, in page 6 of the reply filed 4/18/2007, that amended claim 21 recites, "the coupling comprising a single gasket" in line 3. The examiner takes the position that the coupling as disclosed by Baker in Figure 2, above, has only a single gasket. The Examiner takes further note that the pipe as disclosed by Baker also has a gasket; however, the pipe and the coupling are separate portions of the assembly shown in Figure 2. The issue at hand is the structure of the coupling and not the structure of the pipe.

39. Also, Baker discloses that his invention need not have gasket 26 with the recitation, starting in column 5, line 66, "Optional O-ring seals 24 and 24a received in annular grooves 26, 26a in conjunction with a gasket 23 (see FIG. 2) disposed between flange faces 33, 33a provide weather-tight sealing of connection apparatus 10." Gasket 112 is associated with the pipe portion of the assembly and not the pipe coupling portion of the assembly.



Art Unit: 3679

40. It is also noted that the Examiner interprets the claims such that the pipe coupling is the positively recited invention, with the pipe structure as only being functionally recited in relation to the coupling.

41. Also in page 6, the Applicant appears to be arguing a feature (i.e., the upright shoulder of the expandable mounting ring, part 18d as shown in Applicant's Figure 2) that is not recited in claim 21. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Note that the feature of the expandable mounting ring having an upright shoulder, however, is addressed above in regard to claim 33 with a 35 USC § 103 obviousness rejection based upon Baker in view of Martin (U.S. 3,284,112).

42. Also in page 6, the Applicant appears to be arguing that the metal mounting ring of Baker is not elastically expandable. Does the Applicant claim that metal has no elastic properties? This argument is not persuasive.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay R. Ripley whose telephone number is 571-272-7535. The examiner can normally be reached on 6:00AM - 3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3679

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



J. R. Ripley  
26 APR 2007



AARON DUNWOODY  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 3600